File   View   Edit   Tools   Window   Help

- (11) ((((((goetz-werner-k.in. camras-michael-d.in.
- (4) (("5747832"|"5753939"|"5804839"|"5987047"|"6005
- (4) (US-6657300-$ or US-5747832-$ or US-5804839-$).
- (35) ((((light adj emit$4 adj diode) and ("n-type"
- (18) ((((((light adj emit$ adj diode) or (laser adj
- (18) ((((((light adj emit$ adj diode) or (laser adj
- (38) (emit$4 adj diode) and substrate and (((((p-typ
- (24) ((emit$4 adj diode) and substrate and (((((p-ty
- (6) (((light adj emitting adj diode) or (light-emitt
- (3) (((light adj emitting adj diode) or (light-emit
- (37) "LED" and substrate and (((((p-type) adj layer)
- (233) "LED" and substrate and (((((p-type)) or (p ad
- (10) ("LED" and substrate and (((((p-type) adj layer
- (181) ("LED" and substrate and (((((p-type)) or (p a
- (66) (("LED" and substrate and (((((p-type)) or (p a
- (66) ((("LED" and substrate and (((((p-type)) or (p
- (66) ((("LED" and substrate and (((((p-type)) or (p

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QBe   USPAT, US-PGPUB, EPO, JPO, IBM_TDB   Plurals

Default operator   OR   Highlight all hit terms initially

```
((light adj emitting adj diode) or (light-emitting adj diode)) and
(((chang$4 or var$5) adj concentration) same ((p-type) or (p adj
type)) adj layer)
```

BRS form   ISAR form   Image   Text   HTML

		PT	P	Document ID	Kind Code	Source	Issue Dat	Pages	Title	Curr
1		☑		US 20040075097	US-PGPUB	20040422	11	Formation of Ohmic contacts in III-nitride light emitting devices	257/
2		☑		US 6657300 B2	USPAT	20031202	11	Formation of ohmic contacts in III-nitride light emitting devices	257/
3				US 20030205736	US-PGPUB	20031106	39	Nitride semiconductor device	257/
4				US 20020053676	US-PGPUB	20020509	39	Nitride semiconductor device	257/
5				US 20020008243	US-PGPUB	20020124	15	Formation of ohmic contacts in III-nitride light emitting devices	257/
6	☑			US 6586762 B2	USPAT	20030701	37	Nitride semiconductor device with improved lifetime and high output power	257/

Hits   Details   HTML

Ready   NUM

L Number	Hits	Search Text	DB	Time stamp
-	20	goetz-werner-k.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:12
-	0	camras-cichael-d.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:12
-	27	camras-michael-d.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:12
-	23	chen-changhua.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	8	christenson-gina-l.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	8	kern-scott-r.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	25	kuo-chihping.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	7	martin-paul-scott.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	58	steigerwald-daniel-a.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	30	kern-r-scott.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	79	(goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	47	((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	45	(((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13

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-	38	((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	11	(((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III"	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	1252	(light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:13
-	36	((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	1	"20040075097"	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	5	("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	128	goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	35	(((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:14
-	433	(light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type) or type) with (vary$ indir) variation or chang$4 or increas$4 or decreas$4) with concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:15

| | | 405 | (((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 16:22 |

with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))))

-	169	(((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type))) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))) and (("GaN" or (gallium adj nitride))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:15
-	11	*(overlapping/garbled text)*	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:18
-	4	*(overlapping/garbled text)*	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:18
-	4	(US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.	USPAT; US-PGPUB	2004/08/13 16:18
-	35	(((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:18

–		18	(((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))))) and ("GaN" or (gallium adj nitride)) and substrate and ((active or emit$4) adj layer)) and (((light adj emit$ adj diode) or (laser adj diode))).ti. and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:19

| - | | 18 | ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))))) and ("GaN" or (gallium adj nitride)) and substrate and ((active or emit$4) adj | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 16:19 |
| - | | 38 | layer$4 adj diode) and (((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:12 |

-	24	((emit$4 adj diode) and substrate and ((((p-type) adj layer) or (p adj type adj layer)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride))	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:13
-	6	(overlapping/corrupted text)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:59
-	3	(overlapping/corrupted text)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 16:59
-	37	"LED" and substrate and ((((p-type) adj layer) or (p adj type adj layer)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:12
-	233	"LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:13

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| - | 10 | ("LED" and substrate and ((((p-type) adj layer) or (p adj type adj layer)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5)))) not ("20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) (((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:15 |

(("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or

| - | 181 | ("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) (((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type)) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:15 |

| - | 66 | (("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type)) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:16 |

-	66	((("LED" and substrate and (((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) (((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4 or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) ((("5747832"|"5753939"|"5804839"|"5987047"|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type)) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or	USPAT; US-PGPUB; EPO; JPO; IBM_TDB	2004/08/13 17:17

| - | | 66 | ((("LED" and substrate and ((((p-type)) or (p adj type)) with (contact or electrode)) and ((var$5 or chang$4) near2 concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.) ((((((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride))))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) not ("20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) (goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or (US-20040075097-$).did.))) and (substrate and (contact$4 or electrode))) ((((((light adj emit$ adj diode) or (laser adj diode)) and (((p-type) or (p adj type)) with (varying or variation or chang$4, or increas$4 or decreas$4) with concentration)) not ((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) (((light adj emit$4 adj diode) and ("n-type" or (n adj type)) and (("p-type" or (p adj type)) with ("GaN" or (gallium adj nitride)))) and (("GaN" or (gallium adj nitride)) with concentration with (chang$4 or vari$5))) "20040075097" (("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) ((((((goetz-werner-k.in. camras-michael-d.in. chen-changhua.in. christenson-gina-l.in. kern-scott-r.in. kuo-chihping.in. martin-paul-scott.in. steigerwald-daniel-a.in. kern-r-scott.in.) and (light adj emit$4 adj diode)) and ("GaN")) and (active adj (plate or layer or region))) and ("n-type" or (n adj type)) and ("p-type" or (p adj type))) and "II" and "III") and substrate and (contact or electrode)) (((("5747832"\|"5753939"\|"5804839"\|"5987047"\|"6005258").PN.) and (light adj emit$4 adj diode) and ("n-type" or (n adj type)) and ("p-type" or (p adj type)) ((US-6657300-$ or US-5747832-$ or US-5804839-$).did. or US-5747832-$ or US-5804839-$).did. or | USPAT; US-PGPUB; EPO; JPO; IBM_TDB | 2004/08/13 17:18 |